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TROP PRUNER & HU, PC
8554 KATY FREEWAY
SUITE 100
HOUSTON, TX 77024

EXAMINER	
PARTON, KEVIN S	

ART UNIT	PAPER NUMBER
2153	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/557,451	ABAYE ET AL.	
	Examiner	Art Unit	
	Kevin Parton	2153	

-- The MAILING DATE of this communication appears on the cover she t with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-13,16-21,23,24 and 26-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-13,16-21,23,24,26-28 and 31-37* is/are rejected.

7)☒ Claim(s) *29 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

2. Applicant's arguments filed 03/12/2004 regarding claims 1, 8, 19, 20, 21, 27, 28, 31 have been fully considered but they are not persuasive. Please see the following reasons and the grounds of rejection below.

3. Regarding claim 1, the applicant argues that "the timestamps of Berman do not constitute first performance parameters of respective components of a communications system, where such performance parameters are combined to derive an overall first performance parameter" (page 8, paragraph 2). The argument is not persuasive because the reference to Berman (USPN 5,754,831) teaches the limitations as pointed out in the claims. Specifically, Berman (USPN 5,754,831) shows in column 7, lines 50-55 that parameters are measured for the individual elements (element 310 in the example) and then these parameters are combined and totaled to determine an overall performance parameter. Please also note that more than one parameter (t and the utilization accumulator) are taken into account. This is clearly the assignment of a first parameter to a respective component that is then combined.

The applicant further argues that Berman (USPN 5,754,831) does not teach a second performance parameter of respective components and derives an overall second performance parameter (page 8, paragraph 3 – page 9, paragraph 1). The argument is not persuasive because Berman (USPN 5,754,831) does teach a second performance parameter. First, both t and R*t are

calculated for each network element. This is combined to calculate an overall quality indication of the communication system as shown in column 8, lines 3-8). Further, in column 8, lines 43-47, Berman (USPN 5,754,831) discusses another parameters that can be applied and combined to determine the overall quality of the network.

4. Regarding claims 10 and 20, the arguments are not persuasive for the same reasons shown above in relation to claim 1. Please see the rejection for newly amended claim 10 below.

5. Regarding claim 27, the applicant argues "Berman (USPN 5,754,831) has no need for packet loss and packet jitter parameters...does not teach the derivation of a quality indication based on packet loss, packet jitter, and packet delays of plural components" (page 10, paragraph 1-2). The argument is not persuasive because the packet loss taught by Cain et al. (USPN 6,028,846) can be factored into the overall quality calculation of Berman (USPN 5,754,831). Specifically, packet loss can be applied correctly as part of a simulation to determine network delay as in Berman (USPN 5,754,831). Each component may have a packet loss parameter and this would be part of an overall calculation of delay for the system.

6. Regarding claim 31, the applicant argues that neither Berman (USPN 5,754,831) nor Cain et al. (USPN 6,028,846) teach "assigning a signal loss parameter, an echo parameters or a noise parameter to at least one of the components" (page 10, paragraph 5). The argument is not persuasive because a packet is a type of signal and Cain et al. (USPN 6,028,846) teaches the use of a packet loss metric. The applicant states that a signal loss and a packet loss cannot be considered equivalent, but the Examiner does not see anything more than a semantic difference in the claims.

7. Regarding claims 8 and 20, the applicant argues that it is not obvious to use an E-Model quality rating to derive a quality indication. However, the use of this type of model is well known in the art and is applied to simulation systems such as Berman (USPN 5,754,831).

8. Regarding claim 19, the applicant argues that it is not obvious to include a circuit switched device in the network representation. The argument is not persuasive because the system of Berman (USPN 5,754,831) can be applied to any type of network as it is a model and different device types can be included.

Allowable Subject Matter

9. Claims 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3, 5-7, 9, 11-13, 16, 18, 20, 23, 24, 26, 33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Berman (USPN 5,754,831).

12. Regarding claim 1, Berman (USPN 5,754,831) teaches a system for determining performance of a communications system with means for:

a. Storing representations of plural components of the communications system, the components including a first packet-based network and at least one

network device (column 6, lines 35-45, 51-60; column 2, lines 52-56; figure 3; column 6, line 42).

b. Assigning performance parameters for each of the components, the performance parameters comprising at least a first performance parameter and a second performance parameter (column 6, lines 57-60; column 8, lines 44-46).

c. Combining the first performance parameters of respective components to derive overall first performance parameters (column 8, lines 3-7).

d. Combining the second performance parameters of respective components to derive an overall second performance parameter (column 9, lines 7-12).

e. Deriving a quality indication of the communications system based at least on the overall first and second performance parameters (column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20).

13. Regarding claim 2, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means wherein the components include a second packet-based network, the method further comprising assigning performance parameters for the second packet-based network (column 6, lines 39-43).

14. Regarding claim 3, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means wherein assigning the performance parameters includes assigning a packet delay parameter (column 7, lines 35-57; column 8, line 66 – column 9, line 1).

15. Regarding claim 5, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means wherein assigning the performance parameters includes

assigning a packet jitter parameter (column 7, lines 64-65). Note that it is known whether or not packets arrive in order.

16. Regarding claim 6, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means wherein storing the representations includes storing models of the plural components, the models capable of being linked to create a representation of the communications system (column 6, lines 35-45, 51-61; column 7, lines 2-5).

17. Regarding claim 7, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 6. He further teaches means for providing a graphical user interface in which the models may be manipulated to create the representation of the communications system (column 7, lines 2-5; column 5, lines 57-64).

18. Regarding claim 9, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means for combining the representations of the plural components to create the communications system (column 6, lines 35-45; 51-61).

19. Regarding claim 11, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 35. He further teaches means wherein the one or more performance parameters include a packet delay (column 7, lines 35-57; column 8, line 66 – column 9, line 1).

20. Regarding claim 12, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 11. He further teaches means wherein the packet delay of each network element is treated as an independent variable (column 7, lines 35-57; column 8, line 66 – column 9, line 1; column 6, lines 51-60). Note that packet delay can be set by the user for each element.

21. Regarding claim 13, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 12. He further teaches means wherein the controller calculates an overall packet delay of

the communications system by summing the packet delays of the plural components (column 7, lines 36-57; column 8, lines 3-5).

22. Regarding claim 16, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 35. He further teaches means wherein the representation of the packet based network includes a representation of a collection of links and routers (column 6, lines 35-45).

23. Regarding claim 18, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 35. He further teaches means wherein the packet-based network includes a public network, and wherein the storage device further contains a representation of a local network (column 6, lines 35-45).

24. Regarding claim 20, Berman (USPN 5,754,831) teaches a system for modeling performance of a communications system with means to:

a. Store models of plural components of the communications system, the plural components including a packet-based network and at least one network device, the stored models containing at least first performance parameters and second performance parameters (column 6, lines 35-45, 51-60; column 2, lines 52-56; figure 3; column 6, line 42; column 8, lines 44-46).
b. Combine the models to represent the communications system (column 6, lines 35-45, 51-60; column 2, lines 52-56; figure 3; column 6, line 42).
c. Combine the first performance parameters of respective components to derive an overall first performance parameter (column 8, lines 3-7).
d. Combine the second performance parameters of respective components to derive an overall second performance parameter (column 9, lines 7-12).

e. Determine a quality level of the communications system using at least the overall first performance parameter and overall second performance parameter (column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20).

25. Regarding claim 23, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 20. He further teaches means wherein the performance parameters are associated with communications of packets through the communications system (column 6, lines 57-60; column 7, lines 36-57).

26. Regarding claim 24, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 23. He further teaches means wherein the performance parameters include at least one of a packet delay, packet loss, and packet jitter (column 7, lines 35-57; column 8, line 66 – column 9, line 1).

27. Regarding claim 26, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 20. He further teaches means wherein the performance parameters include at least one of a packet delay, packet jitter, and packet loss (column 7, lines 35-57; column 8, line 66 – column 9, line 1).

28. Regarding claim 33, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means wherein deriving the quality indication comprises deriving a value that is representative of a subjective perceived quality of communications in the communications system by a user (column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20). Note that transmission time as viewed by the end user is a subjective measurement of communication quality.

29. Regarding claim 35, Berman (USPN 5,754,831) teaches a system for determining performance of a communications system comprising:

a. A storage device containing representations of plural components of the communications system, the plural components including a packet-based network and at least one network device, each of the components being assigned one or more performance parameters (column 6, lines 35-45, 51-60; column 2, lines 52-56; figure 3; column 6, line 42; column 6, lines 57-60).

b. A controller to calculate a predicted quality of the communications system based on the one or more performance parameters, wherein the predicted quality comprises a value that is representative of a subjective perceived quality of communications in the system by the user (column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20). Note that transmission time as viewed by the end user is a subjective measurement of communication quality.

c. Wherein the performance parameters comprise at least first and second performance parameters (column 6, lines 57-60; column 8, lines 44-46; column 8, lines 3-7; column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20).

d. A controller to combine the first performance parameters of respective components to derive an overall first performance parameter, and the controller to combine the second performance parameters of respective components to derive an overall second performance parameter, the controller

to calculate the predicted quality based on the overall first performance parameter and the overall second performance parameter (column 6, lines 57-60; column 8, lines 44-46; column 8, lines 3-7; column 7, lines 36-57; column 2, lines 46-48; column 9, lines 7-20).

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

31. Claims 8, 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berman (USPN 5,754,831).

32. Regarding claims 8 and 21, although the system disclosed by Berman (USPN 5,754,831) (as applied to claims 1 and 20, respectively) shows substantial features of the claimed invention, it fails to disclose means wherein deriving the quality indication includes calculating an E-model quality rating value.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831). The E-model is a standard generated and maintained by the International Telecommunications Union.

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the E-model quality rating value to signify the quality of network performance. Any rating scale could be used that

takes into account the performance parameters chosen. This benefits the system by giving a normalized value that can be compared among vastly different networks.

33. Regarding claim 17, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose means wherein the representation of the packet based network includes a representation of an Internet Protocol network.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the representation of an IP based network. IP networks are very common in current usage and information will be flowing from LANs to the Internet. This benefits that system by giving a more flexible model and a more realistic representation.

34. Regarding claim 19, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose means wherein the representation of the packet based network includes a representation of circuit switched device.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831).

A person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the representation of a circuit switched device. Hybrid networks are very common in current usage and information

will be flowing from LANs to circuit switched networks. This benefits that system by giving a more flexible model and a more realistic representation.

35. Claims 4, 27-29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berman (USPN 5,754,831) in view of Cain et al. (USPN 6,028,846).

36. Regarding claim 4, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose means wherein assigning one or more performance parameters includes assigning a packet loss parameter.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Cain et al. (USPN 6,028,846).

In an analogous art, Cain et al. (USPN 6,028,846) discloses a system for the simulation of network performance wherein assigning one or more performance parameters includes assigning a packet loss parameter (column 4, lines 1-5, 46-57).

Given the teaching of Cain et al. (USPN 6,028,846), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of a packet loss parameter. This benefits the system because packet loss is a common problem and knowing the likelihood of loss, appropriate recovery means can be implemented.

37. Regarding claim 27, Berman (USPN 5,754,831) teaches a system for predicting performance of a communications system with means to:

a. Assign performance parameters to each of plural components in the communications system, the plural components including a packet-based network, the performance parameters comprising packet jitter and packet delay (column 6, lines 35-45, 51-60; column 2, lines 52-56; figure 3; column 6, line 42; column 7, lines 35-57; column 8, line 66 – column 9, line 1).

b. Derive a quality indication based on the packet jitters and packet delays of the plural components of the plural components (column 7, lines 36-57; column 2, lines 46-48).

Although the system disclosed by Berman (USPN 5,754,831) shows substantial features of the claimed invention, it fails to disclose specifically means wherein one of the performance parameters is packet loss.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Cain et al. (USPN 6,028,846).

In an analogous art, Cain et al. (USPN 6,028,846) discloses a system for the simulation of network performance wherein one of the performance parameters is packet loss (column 4, lines 1-5, 46-57).

Given the teaching of Cain et al. (USPN 6,028,846), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of a packet loss parameter. This benefits the system because packet loss is a common problem and knowing the likelihood of loss, appropriate recovery means can be implemented.

38. Regarding claim 28, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 1. He further teaches means for combining packet delays of respective components to derive an overall packet delay (column 8, lines 3-7).

Although the system disclosed by Berman (USPN 5,754,831) shows substantial features of the claimed invention, it fails to disclose specifically means wherein packet loss is combined to derive an overall packet loss.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Cain et al. (USPN 6,028,846).

In an analogous art, Cain et al. (USPN 6,028,846) discloses a system for the simulation of network performance wherein packet loss is combined to derive an overall packet loss (column 4, lines 1-5, 46-57).

Given the teaching of Cain et al. (USPN 6,028,846), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of a packet loss parameter and overall packet loss. This benefits the system because packet loss is a common problem and knowing the likelihood of loss, appropriate recovery means can be implemented.

39. Regarding claim 29, Berman (USPN 5,754,831) teaches all the limitations as applied to claim 28. He further teaches means wherein the performance parameters further comprise packet jitter, the method further comprising combining the packet jitters of respective components to derive an overall packet jitter, wherein deriving the quality indication is further based on the

overall packet jitter (column 7, lines 64-65). Note that it is known whether or not packets arrive in order.

40. Regarding claim 31, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose specifically :

a. Assigning at least one of a signal loss parameter, echo parameter, and noise parameter to at least another one of the system components.

b. Wherein deriving the quality indication is further based on the at least one of the signal loss parameter, echo parameter and noise parameter.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Cain et al. (USPN 6,028,846).

In an analogous art, Cain et al. (USPN 6,028,846) discloses a system for the simulation of network performance with means for:

a. Assigning at least one of a signal loss parameter, echo parameter, and noise parameter to at least another one of the system components (column 4, lines 1-5, 46-57).

b. Wherein deriving the quality indication is further based on the at least one of the signal loss parameter, echo parameter and noise parameter (column 4, lines 1-5, 46-57).

Given the teaching of Cain et al. (USPN 6,028,846), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN

5,754,831) by employing the use of a signal loss parameter and overall signal loss. This benefits the system because signal loss is a common problem and knowing the likelihood of loss, appropriate recovery means can be implemented.

41. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berman (USPN 5,754,831) in view of Geshwind (USPN 6,507,872).

42. Regarding claim 30, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 1) shows substantial features of the claimed invention, it fails to disclose:

a. Assigning an audio CODEC type parameter to at least one of the components.

b. Wherein deriving the quality indication is further based on the audio CODEC type parameter.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Geshwind (USPN 6,507,872).

In an analogous art, Geshwind (USPN 6,507,872) discloses a system for predicting network performance with means for:

a. Assigning an audio CODEC type parameter to at least one of the components (abstract; column 16, lines 62-67).

b. Wherein deriving the quality indication is further based on the audio CODEC type parameter (abstract; column 16, lines 62-67).

Given the teaching of Geshwind (USPN 6,507,872), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of an audio CODEC type parameter. This benefits the system

because the end user will notice degradations in service to audio and video type feeds more quickly than other data types. Modeling the performance of these data types will allow for prediction of the delays users will see.

43. Claims 32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berman (USPN 5,754,831) in view of Thomas et al. (USPN 6,665,271).

44. Regarding claims 32 and 36, although the system disclosed by Berman (USPN 5,754,831) (as applied to claims 1 and 20, respectively) shows substantial features of the claimed invention, it fails to disclose specifically means wherein deriving the quality indication comprises deriving a mean opinion score (MOS).

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Thomas et al. (USPN 6,665,271).

In an analogous art, Thomas et al. (USPN 6,665,271) discloses a system for predicting network performance wherein deriving the quality indication comprises deriving a mean opinion score (MOS) (column 11, lines 62-67).

Given the teaching of Thomas et al. (USPN 6,665,271), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of MOS to determine subjective quality. This benefits the system by allowing users to determine what real breakdowns in quality are and when they occur.

45. Regarding claim 34, although the system disclosed by Berman (USPN 5,754,831) (as applied to claim 35) shows substantial features of the claimed invention, it fails to disclose

specifically means wherein the value comprises at least one of an E-model quality rating, mean opinion score (MOS), a percentage of users that view a connection as good or better, percentage of users that view a connection as poor or worse, and percentage of connections that users may terminate early due to quality problems.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Thomas et al. (USPN 6,665,271).

In an analogous art, Thomas et al. (USPN 6,665,271) discloses a system for predicting network performance wherein the value comprises at least one of an E-model quality rating, mean opinion score (MOS), a percentage of users that view a connection as good or better, percentage of users that view a connection as poor or worse, and percentage of connections that users may terminate early due to quality problems (column 11, lines 62-67).

Given the teaching of Thomas et al. (USPN 6,665,271), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of MOS to determine subjective quality. This benefits the system by allowing users to determine what real breakdowns in quality are and when they occur.

46. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berman (USPN 5,754,831) and Cain et al. (USPN 6,028,846) as applied to claim 27 above, and further in view of Thomas et al. (USPN 6,665,271).

47. Regarding claim 37, although the system disclosed by Berman (USPN 5,754,831) and Cain et al. (USPN 6,028,846) (as applied to claim 27) shows substantial features of the claimed

invention, it fails to disclose specifically means wherein deriving the quality indication comprises deriving at least one of an E-model rating and a mean opinion score.

Nonetheless, these features are well known in the art and it would have been an obvious modification of the system disclosed by Berman (USPN 5,754,831), as evidenced by Thomas et al. (USPN 6,665,271).

In an analogous art, Thomas et al. (USPN 6,665,271) discloses a system for predicting network performance wherein deriving the quality indication comprises deriving at least one of an E-model rating and a mean opinion score (column 11, lines 62-67).

Given the teaching of Thomas et al. (USPN 6,665,271), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Berman (USPN 5,754,831) by employing the use of MOS to determine subjective quality. This benefits the system by allowing users to determine what real breakdowns in quality are and when they occur.

Conclusion

48. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Parton whose telephone number is (703)306-0543. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703)305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Parton
Examiner
Art Unit 2153

ksp

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100